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Claims

1. Sound generating device for a mobile terminal of a wireless telecommunication system, with
- 10 memory means (5) for storing waveforms, each waveform corresponding to a sound and each waveform comprising a predetermined number of samples, selecting means (3) for selecting a sound and a pitch for said sound to be generated, calculating means (6) for calculating, on the basis of a preset calculation rule, a sound table from the samples of the waveform of a selected sound,
- 15 reading means (8) for reading out a part of the samples from said calculated sound table depending on said selected pitch for said sound, and output means (2) for outputting a sound on the basis of said part of samples read out from said reading means.
- 20 2. Sound generating device according to claim 1, **characterized in**, that each waveform stored in said memory means (5) consists of one period of samples of a frequency distribution of said sound to be generated.
- 25 3. Sound generating device according to claim 2, **characterized in**, that each waveform stored in said memory means (5) consists of a predetermined number of 51 samples .
- 30 4. Sound generating device according to claim 1, **characterized in**, that said calculating means (6) calculates said sound table on the basis of an interpolation calculation.
- 35 5. Sound generating device according to claim 4, **characterized in**, that the number of calculated interpolated samples between two adjacent samples of said waveform depends on the selected pitch for the sound to be generated.
- 40 6. Sound generating device according to claim 5,

characterized in,

that said number of calculated interpolated samples is the same for each note of an octave, but decreases with ascending octaves.

- 5 7. Sound generating device according to claim 1,
characterized in,

that said reading means (8) reads out every n-th sample from said sound table, n being an integer number.

- 10 8. Sound generating device according to claim 7,
characterized in,

that said number n depends on the selected pitch for said sound to be generated.

- 15 9. Sound generating device according to claim 8,
characterized in,

that said number n increases with ascending notes within an octave, but is the same for each respective note in the different octaves.

- 20 10. Sound generating device according to claim 9,
characterized in,

that said reading means (8) reads out the samples from the sound table with a rate of about 8 kHz.

- 25 11. Sound generating method for a mobile terminal of a wireless telecommunication system, comprising the steps of
selecting a sound and a pitch for a sound to be generated from stored waveforms, each stored waveform corresponding to a sound and each stored waveform comprising a predetermined number of samples,
calculating, on the basis of a preset calculation rule, a sound table from the samples of
30 the waveform of a selected sound,
reading out a part of the samples from said calculated sound table depending on said selected pitch for said sound, and
outputting a sound on the basis of said read out part of samples.

- 35 12. Sound generating method according to claim 11,
characterized in,

that each stored waveform consists of one period of samples of a frequency distribution of said sound to be generated.

13. Sound generating method according to claim 12,
characterized in,
that each stored waveform consists of a predetermined number of 51 samples .

5 14. Sound generating method according to claim 11,
characterized in,
that in said calculating step said sound table is calculated on the basis of an interpolation
calculation.

10 15. Sound generating method according to claim 14,
 characterized in,
 that the number of calculated interpolated samples between two adjacent samples of said
 waveform depends on the selected pitch for the sound to be generated.

15 16. Sound generating method according to claim 15,
 characterized in,
 that said number of calculated interpolated samples is the same for each note of an
 octave, but decreases with ascending octaves.

20 17. Sound generating method according to claim 11,
characterized in,
that in said reading step every n-th sample is read out from said sound table, n being an
integer number.

25 18. Sound generating method according to claim 17,
characterized in,
that said number n depends on the selected pitch for said sound to be generated.

19. Sound generating method according to claim 18,
30 **characterized in,**
that said number n increases with ascending notes within an octave, but is the same for
each respective note in the different octaves.

20. Sound generating method according to claim 19,
35 **characterized in,**
that in said reading step the samples from the sound table are read out with a rate of
about 8 kHz.